SCB-2408-D

Dual Interface External Slim Combo Drive

24x/12x/24x CD-RW Drive
8x DVD-ROM Drive

User Manual



Copyrights/Disclaimer

ASUS PROVIDES THIS MANUAL “AS IS” WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL ASUS, ITS DIRECTORS, OFFICERS, EMPLOYEES OR AGENTS BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES (INCLUDING DAMAGES FOR LOSS OF PROFITS, LOSS OF BUSINESS, LOSS OF USE OR DATA, INTERRUPTION OF BUSINESS AND THE LIKE), EVEN IF ASUS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES ARISING FROM ANY DEFECT OR ERROR IN THIS MANUAL OR PRODUCT.

Product warranty or service will not be extended if: (1) the product is repaired, modified or altered, unless such repair, modification of alteration is authorized in writing by ASUS; or (2) the serial number of the product is defaced or missing.

The product name and revision number are both printed on the product itself. Manual revisions are released for each product design represented by the digit before and after the period of the manual revision number. Manual updates are represented by the third digit in the manual revision number.

SPECIFICATIONS AND INFORMATION CONTAINED IN THIS MANUAL ARE FURNISHED FOR INFORMATIONAL USE ONLY, AND ARE SUBJECT TO CHANGE AT ANY TIME WITHOUT NOTICE, AND SHOULD NOT BE CONSTRUED AS A COMMITMENT BY ASUS. ASUS ASSUMES NO RESPONSIBILITY OR LIABILITY FOR ANY ERRORS OR INACCURACIES THAT MAY APPEAR IN THIS MANUAL, INCLUDING THE PRODUCTS AND SOFTWARE DESCRIBED IN IT.

Products and corporate names appearing in this manual may or may not be registered trademarks or copyrights of their respective companies, and are used only for identification or explanation and to the owners’ benefit, without intent to infringe.

Product Name:	**ASUS External Slim CD-RW/DVD-ROM Drive (SCB-2408-D)**
Manual Version:	**Revised Edition V2 E1315**
Release Date:	**May 2003**

Contents

Notices

Federal Communications Commission Statement

This device complies with FCC Rules Part 15. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with manufacturer's instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

WARNING! *The use of shielded cables for connection of the monitor to the graphics card is required to assure compliance with FCC regulations. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.*

Canadian Department of Communications Statement

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

This class B digital apparatus complies with Canadian ICES-003.

ASUS Contact Information

ASUSTeK COMPUTER INC. (Asia-Pacific)

Address:	150 Li-Te Road, Peitou, Taipei, Taiwan 112
General Tel:	+886-2-2894-3447
General Fax:	+886-2-2894-3449
General Email:	info@asus.com.tw

Technical Support

MB/Optical Drives (Tel):	+886-2-2890-7121 (English)
Notebook (Tel):	+886-2-2890-7122 (English)
Desktop/Server (Tel):	+886-2-2890-7123 (English)
Support Fax:	+886-2-2890-7698
Web Site:	www.asus.com.tw

ASUS COMPUTER INTERNATIONAL (America)

Address:	44370 Nobel Drive, Fremont, CA 94538, USA
General Fax:	+1-510-608-4555
General Email:	tmd1@asus.com

Technical Support

Support Fax:	+1-502-933-8713
General Support:	+1-502-995-0883
Web Site:	www.asus.com
Support Email:	tsd@asus.com

ASUS COMPUTER GmbH (Germany and Austria)

Address:	Harkortstr. 25, 40880 Ratingen, BRD, Germany
General Fax:	+49-2102-9599-31
General Email:	sales@asuscom.de (for marketing requests only)

Technical Support

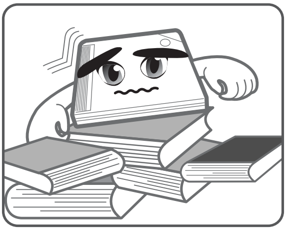
Support Hotlines:	Components:	+49-2102-9599-0
	Notebook PC:	+49-2102-9599-10
Support Fax:	+49-2102-9599-11	
Support (Email):	www.asuscom.de/kontakt (for online support)	
Web Site:	www.asuscom.de	

Safety Information

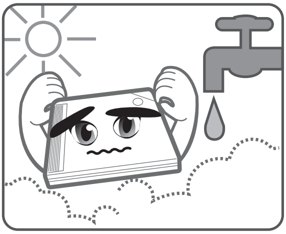
Observe the following precautions before installing and using the ASUS External Slim CD-RW/DVD-ROM (SCB-2408-D) Drive!

Installation Notices

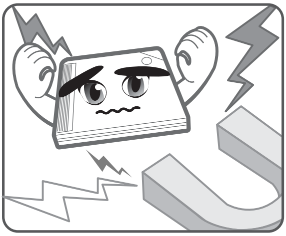
Do not place this device in an unstable position, or on vibrating surfaces.



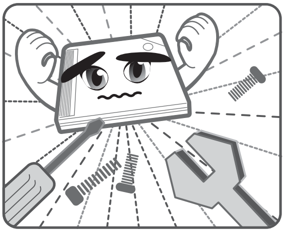
Do not place this device under direct sunlight or in humid or damp places.



Do not use or place this device near magnetic fields, televisions, or radios to avoid electronic interference that affects drive performance.



Do not attempt to disassemble or repair the drive. Opening the drive may result to laser radiation exposure.



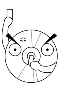
Safety Information

Using the Device

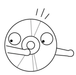
- Use of any controls, adjustments, or procedures other than those specified in this manual may result to hazardous radiation exposure.
- Do not attempt to disassemble the drive.
- Do not move the device from a cold to a warm or hot environment. Drastic change of temperature is harmful to the device.
- Before moving or uninstalling the drive, remove disc from it, if any.
- Prevent liquids and metal objects to get into the device. If this situation occurs, contact your retailer for assistance.
- Do not use any evaporating solvents to clean the device. If you accidentally sprayed any solvent on the device, use a clean cloth to wipe it. You may also use a neutral cleaner to dilute the solvent to easily wipe it from the device.
- Try not to interrupt the supply of power while the device is in reading or writing mode.
- Do not place damaged or warped discs inside the device. A warped disc may break while in use and damage the device.
- Do not place discs into the device immediately if they came from a cold environment, especially during cold seasons. Wait until the discs have reached room temperature.

Conventions used in this guide

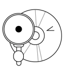
To make sure that you perform certain tasks properly, take note of the following symbols used throughout this manual.



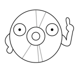
WARNING/DANGER: Information to prevent injury to yourself when trying to complete a task.



CAUTION: Information to prevent damage to the components when trying to complete a task.



IMPORTANT: Information that you MUST follow to complete a task.



NOTE: Tips and additional information to aid in completing a task.

Package Contents

Upon opening your ASUS External Slim CD-RW/DVD-ROM (SCB-2408-D) drive package, check if all the following items are present and in good condition. If any of the items is damaged or missing, contact your retailer immediately.

- ASUS External Slim CD-RW/DVD-ROM drive (SCB-2408-D)
- Cable set (USB 2.0 cable and IEEE 1394 cable)
- Power adapter and plug
- ASUS CD-R blank disc
- ASUS CD-RW blank disc
- User Manual (English and Traditional Chinese)
- Multi-language quick installation poster
- Bundled software CD
  - CD-writing software
  - DVD Playback software
  - Win98SE and MacOS USB 2.0 driver
- Special drive jacket

The above items are available in retail boxes only.

Welcome!

Thank you for buying the ASUS External Slim CD-RW/DVD-ROM (SCB-2408-D) Drive!

To ensure proper installation and use of this device, read the instructions and other important information contained in this manual.

Product Introduction

Specifications

The SCB-2408-D has the following specifications.

- **Speeds**

- CD-R Write Speed	24x, 20x, 16x (P-CAV), 10x, 8x, 4x (CLV)
- CD-RW Write Speed	12x (P-CAV), 10x, 8x, 4x (CLV)
- CD Read Speed	24x max (CAV)~3600 KB/Sec
- DVD Read Speed	8x max (CAV)~10820 KB/Sec
- DAE Speed	24x max (CAV)~3600 KB/Sec

- **Random Access Time** DVD: 120 ms and CD: 100 ms
- **Interface** USB 2.0 and IEEE1394
- **Technology support** *FlextraSpeed*™ Technology
FlextraLink™ Technology
P-CAV Recording Technology
- **Buffer Memory Size** 2 MB
- **Application discs** 12cm or 8 cm diameter, 1.2mm thick
DVD: DVD-ROM, DVD-R, DVD-RW, DVD-Video, DVD+RW, DVD+R
CD: CD-Audio, CD-ROM, CD-ROM/XA, CD-I, Mixed Mode CD-ROM, Photo CD, CD-Extra, Video CD, CD-Text, DVCD, CD-G, Karaoke CD, I-trax, Bootable CD
- **Writing Mode** Track-at-Once, Disc-at-Once, Session-at-Once, Multi-Session, Packet Write, DAO-RAW Mode
- **Dimensions** 129.0 (w) x 142.0 (d) x 16.0 mm (h)
- **Mass** 250 g (0.55 lb)

Refer to the section "Technical Information" on page 28 for detailed specifications.

Features

The ASUS SCB-2408-D is an External Slim CD-RW/DVD-ROM drive with 24x CD-Write, 12x CD-ReWrite, 24x CD-Read and 8x DVD-Read capabilities. The drive complies with the Universal Serial Bus 2.0 (USB 2.0) and IEEE 1394 specifications and comes equipped with the latest innovative technologies in CD recording.

ASUS External Slim CD-RW/DVD-ROM drives are accentuated by the latest innovations in CD-recording technology, namely: *FlextraSpeed*™, *FlextraLink*™, and the P-CAV (Partial Constant Angular Velocity).

The following sub-sections describe these technologies in detail.

FlextraSpeed™ Technology

The ASUS *FlextraSpeed*™ technology provides the optimum solution to ensure quality recording when using discs that require flexible speeds. The SCB-2408-D drive employs this technology that allows automatic recording speed adjustment based on the recording media.

In addition to the fact that there are low and high quality recording media, various other factors such as dye layer, temperature, humidity, dust, fingerprints, etc., affect the recording characteristics of CD-R and CD-RW discs. Due to these factors, some discs may not be able to stand the high-speed capabilities of the latest CD-RW drives. The *FlextraSpeed*™ technology solves this problem by automatic assessment of the disc quality and recording capability. The recording speed is based on these factors. If you use a high quality recording disc, you can maximize the recording capability of the drive and get the best quality output. If you use a low quality disc, the drive speed adjusts to the level that is most appropriate for the disc, still optimizing the disc recording capability.

The *FlextraSpeed*™ technology also helps maintain the CD-RW drive because of the controlled motor rotation speeds and reduced noise caused by spindle air, thus prolonging the drive motor’s life and ensuring high-quality recording.

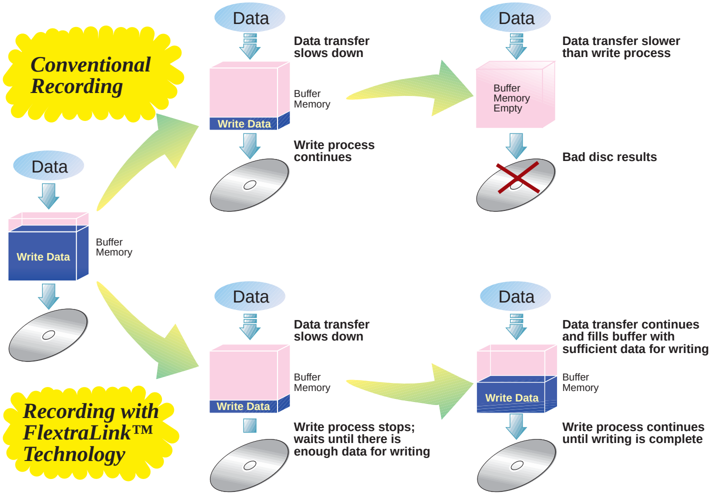
FlextraLink™ Technology

The ASUS *FlextraLink*™ technology provides a seamless combination of flexibility and ultra-reliable recording quality.

FlextraLink™ incorporates a flexible strategy that prevents buffer underrun problems caused by an empty data buffer. This CD-RW drive technology allows continuous monitoring of the data buffer status during the write process. Once the available data drops to approximately 1% of the total buffer capacity, the drive stops recording and marks the last write position. When new data is received from the host, it is loaded to the data buffer, and the laser is repositioned to link the new data with the data already written. *FlextraLink*™ uses minimal system resources so that your PC remains fully operational throughout the writing process, and available for other applications.

The diagram below shows the advantage of the *FlextraLink*™ recording technology.

FlextraLink™ Technology Solution

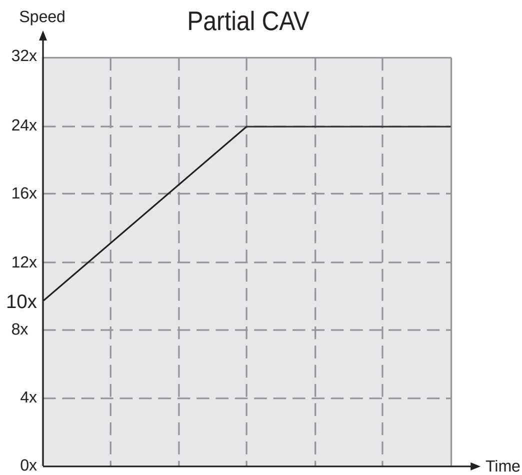


Partial Constant Angular Velocity (P-CAV) Recording Technology

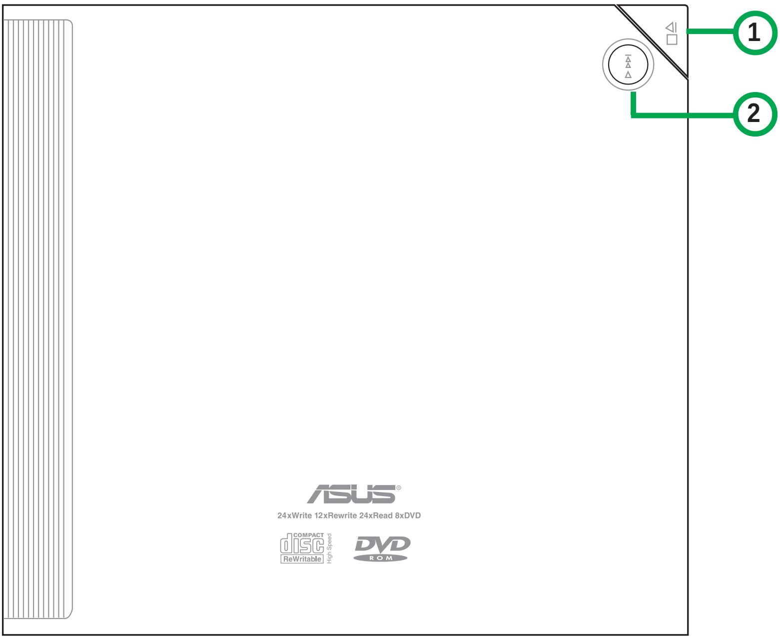
The Partial Constant Angular Velocity (P-CAV) recording method is a combination of the Constant Angular Velocity (CAV) and Constant Linear Velocity (CLV) recording technologies. In CAV recording technology, the drive maintains a consistent rotation speed which will result in a variable transfer rate, while in CLV recording technology, the data transfer rate is kept at a fixed level by changing the rotation speed.

P-CAV recording technology switches from CAV to CLV once the maximum transfer rate is reached. Unlike Zone Constant Linear Velocity (Z-CLV) recording, no links are produced in the P-CAV recording process, resulting in a higher average transfer rate.

The following illustration shows the Partial Constant Angular Velocity (P-CAV) recording technology.



Top Cover Panel



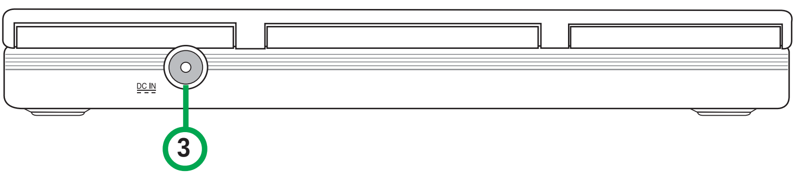
1. **STOP/OPEN Button**

   This button has two functions. Pressing this button when power is ON opens the top cover. While in PLAY mode, pressing this button stops playing the disc loaded in the drive.

2. **PLAY/SKIP Button**

   This button has two functions. If the drive is idle, pressing this button will start playing a loaded audio disc from the first track. While in the PLAY mode, pressing this button skips to the next track on the disc.

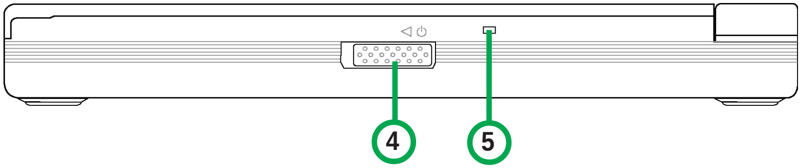
Left Side Panel



3. **5V Power Jack**

   This jack is for the AC adaptor power cable.

Right Side Panel

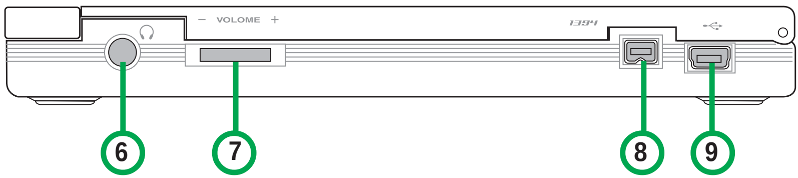


4. **Power switch**
   Turns the power supply ON or OFF. Switching to the right turns the machine OFF and switching to the left turns it ON.

5. **Power/Read/Write Indicator**

   This LED flashes green when drive power is turned ON, when reading data from a disc or when the USB connection is established.It flashes red when data is being written on a disc. The LED turns off when drive power supply is OFF.

Rear Panel



6. **Headphone Jack**

   This jack allows you to connect a headphone with a stereo mini-plug.

7. **Headphone Volume Dial**

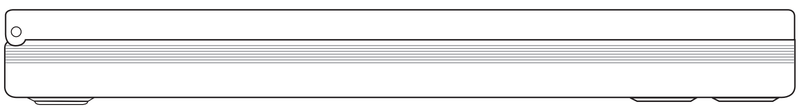
   To adjust volume of headphone connected, turn dial to the left to decrease volume; turn to the right to increase volume.

8. **IEEE 1394 connector**

   A standard high performance serial bus interface for computers.

9. **USB connector**
   A standard Universal Serial Bus (USB 2.0) plug and play interface.

Front Panel



Installation

System Requirements

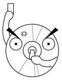
Before installing and using the SCB-2408-D, make sure that your computer system meets the following requirements.

For Notebook or PC:

- IBM-compatible Pentium® II - 333 MHz or higher PC
- Windows 98SE/ME/2000/XP operating system
- At least 64MB RAM (128MB recommended)

For Macintosh:

- PowerPC® Processor (G3, G4 or G4 Dual)
- Mac OS version 9.1, 9.2 or Mac OS X version 10.1
- 128MB of RAM

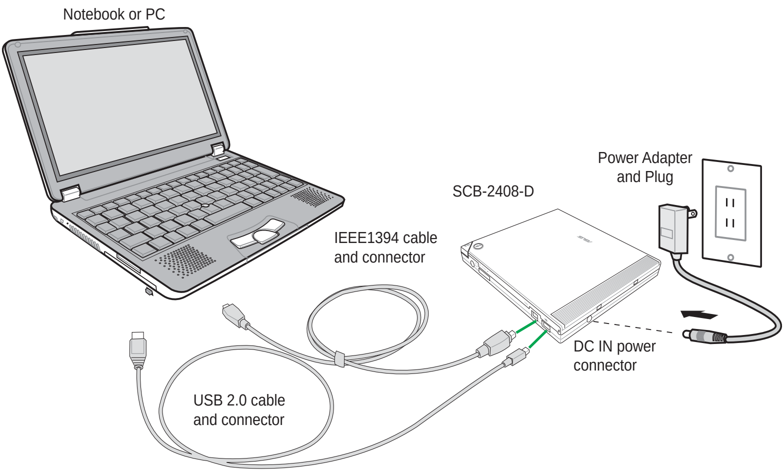


Do not use damaged or warped disc in the drive. The disc may break apart during use and cause potential body injury or damage to your drive.

Connecting the Drive Cables

1. Connect the USB cord - B series plug to the drive USB 2.0 connector or connect the IEEE 1394 plug to the drive IEEE 1394 connector.
2. Connect the USB cord - A series plug to the USB 2.0 connector or connect the IEEE 1394 plug to the drive IEEE 1394 connector of your notebook, PC or Mac .
3. Connect the adapter cable to DC IN power connector on your drive.
4. If necessary, use plug adapter to fit power outlets in your area. See next section for instructions on how to use the power adapter and plug.
5. Connect the power adapter and plug to a power source.

All the cable plugs are slotted so that they fit in only one orientation. If a plug does not fit in completely, try reversing it. DO NOT use too much force when fitting the cable plugs.



Power plug types may vary in different countries or regions around the world.

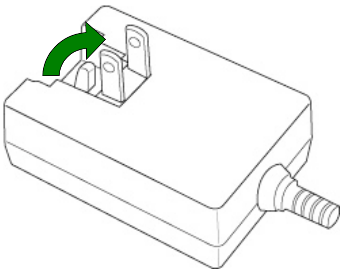
Using the Power Adapter and Plug

The power adapter and plug adapter enables the user to plug-in the drive to any power source in different regions around the world.

The following describe the steps of using the power adapter and plug adapter kit:

Installation and Use

The power adapter comes with a plug with two flat parallel prongs. If this suites your region, lift the prongs upward to a 90-degree angle to use.



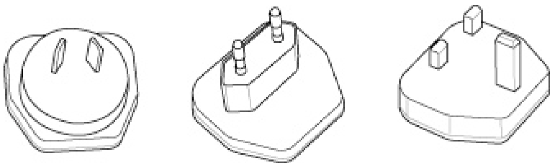
Using the adapter plug

1. Power plug and outlets may vary in different regions around the world. Use any of the three (3) adapter plugs to fit power outlets in your area. Check your package for the following items:

    (A) Adapter plug with two flat prongs that form a V-shape.

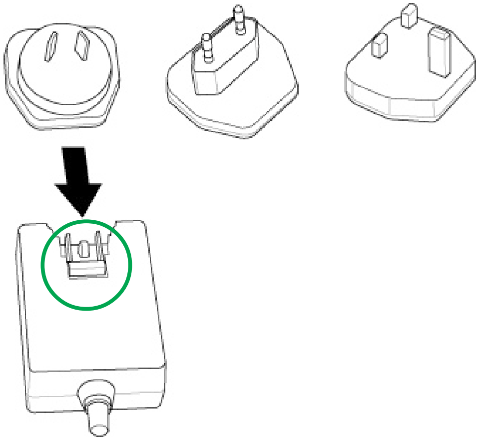
    (B) Adapter plug with two round prongs

    (C) Adapter plug with three prongs (two flat and one rectangular)

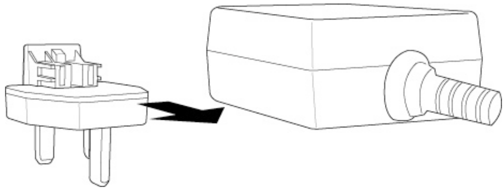


(A) (B) (C)

2. Each plug adapter is slotted to fit into the power adapter. Make sure the flat parallel prongs on the power adapter is in flat position before inserting any plug adapter.

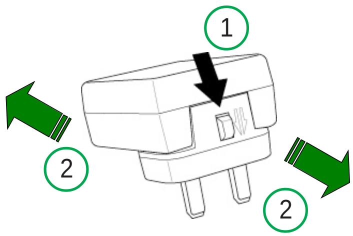


3. Insert the plug adapter into power adapter until it locks properly in place.



Removing the plug adapter

1. To remove the plug adapter, push the clip-lock to the direction indicated by the arrow.
2. When released, pull the adapter plug and power adapter on opposite directions.



Installing the SCB-2408-D driver

For Windows 98SE™ users

Windows 98 Second Edition users need to install the SCB-2408-D device driver for the notebook or PC to recognize the new hardware installed. A device driver is the software program that makes a device work on an operating system (OS).

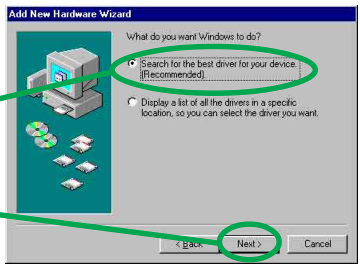
Follow these steps to install the SCB-2408-D driver:

1. Make sure all cable connections to the drive and the notebook or PC are properly connected.
2. Boot notebook or PC.
3. Insert the bundled software CD in the CD drive of your notebook or PC.
4. Turn on the SCB-2408-D drive.
5. After boot-up, the OS will detect a new hardware was found. Follow the wizard to copy the driver files to your system.

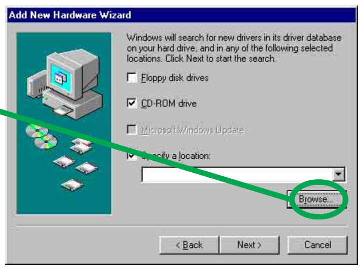
   Click **Next**.



6. Windows 98SE™ can automatically search for the best driver for the device, select (Recommended) option.
   Click **Next**.



7. Specify the location of the driver .INF file , click on **Browse**.



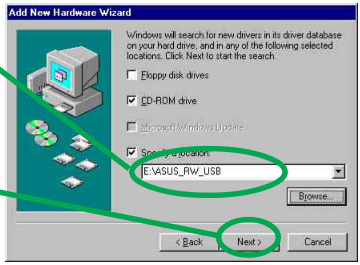
8. Locate the file folder name "**ASUS_RW_USB**" in the CD ROM drive.

   Click **OK**.



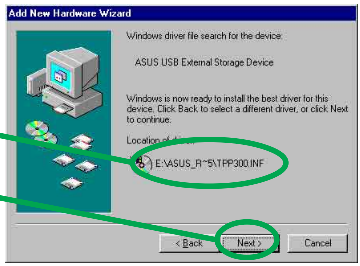
9. The specific location of the drive will appear on the CD-RW/DVD-ROM list box.

   Click **Next**.

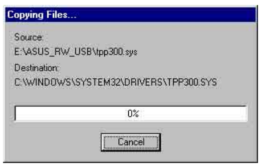


10. After searching, the location of the driver and driver .INF file name is displayed.

    Click **Next**.

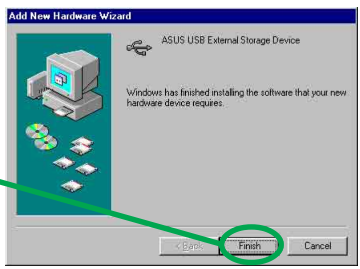


11. A message box with the installation progress bar is displayed. If cancelled, the installation process has to be repeated from the start.



12. The SCB-2408-D driver is successfully installed.

    Click **Finish** to start using your external drive!



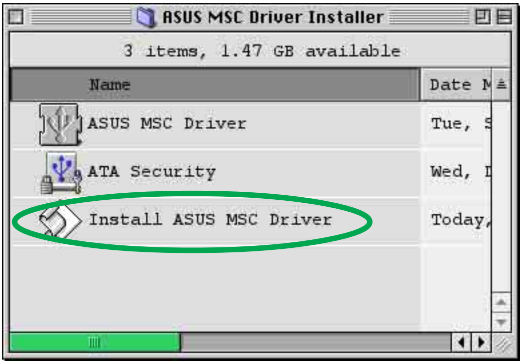
Installing the SCB-2408-D driver

For Macintosh OS 9.X systems

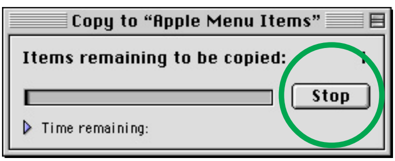
Mac OS 9.x system users need to install the SCB-2408-D device driver for the Mac to recognize the new hardware installed.

Follow these steps to install the SCB-2408-D driver:

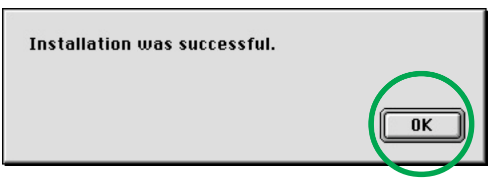
1. Start-up Mac.
2. Insert the bundled software CD in the CD drive of your Mac.
3. Open the folder "**ASUS MSC Driver Installer**".
4. Double click on the icon "**Install ASUS MSC Driver**".



5. A window displaying progress of installation process appears. If you want to abort installation, press **Stop** button.



6. After all files or items are copied to the system, a confirmation dialog box appears. Click **OK** and you may start using your external drive!

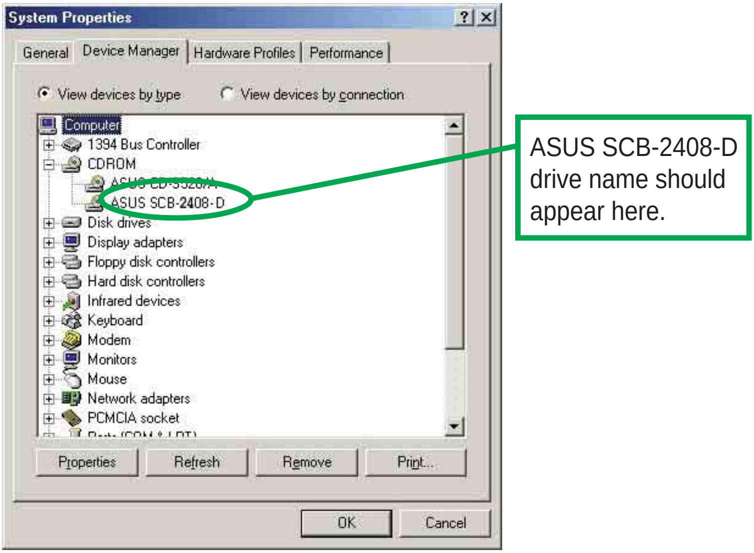


Checking the Drive in the System

To make sure the SCB-2408-D drive is recognized by the computer, follow these steps to check the computer.

For Windows OS:

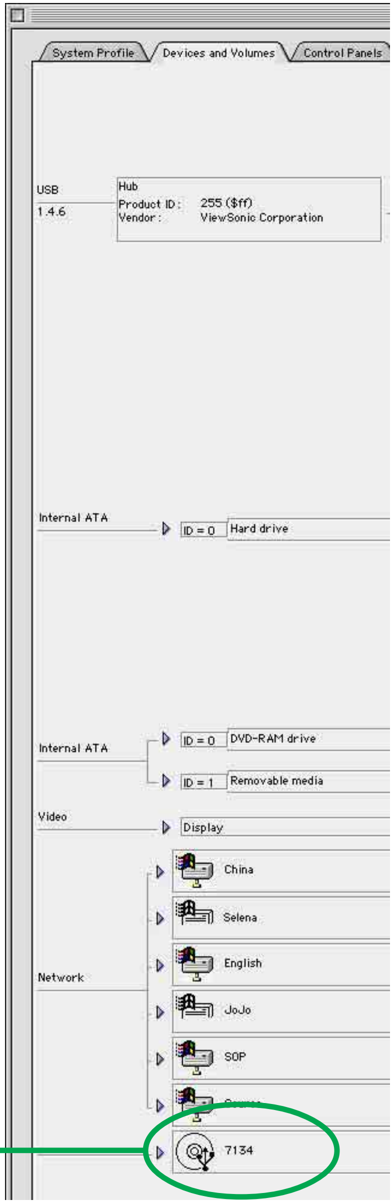
1. Right-click **My Computer** icon on your desktop.
2. On the pop-up menu, click **Properties**.
3. Click the **Device Manager** tab on the system properties dialogue box.
4. Click on CD-ROM from the list.



Screen display may vary depending on the operating system (OS) version.

For Macintosh OS:

1. If necessary, turn ON the drive.
2. Place a disc in the SCB-2408-D drive.
3. Execute the **System Profiler** from the Apple Control Panels.
4. Click on the **Devices and Volumes** tab. All types of devices attached to the Mac system are displayed on this tab.
5. Look for an additional disc icon with the USB device symbol.  The icon is displayed with the volume label of the disc placed in the drive. It is usually added at the bottom of the list.



Unplugging the SCB-2408-D Device

The SCB-2408-D, when installed, needs to be properly unplugged or disconnected from the computer to avoid computer to crash or possible data loss.

Follow these steps to safely unplug your SCB-2408-D drive from the notebook or PC if you are using Windows operating system.

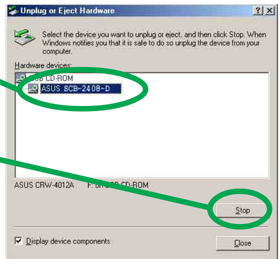
1. Locate the **Unplug or Eject Hardware** icon found in the taskbar.

   Double-click on the icon.



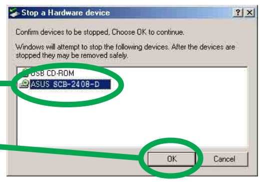
2. Select the name of the hardware device ("ASUS SCB-2408-D"), to unplug.

   Click **Stop**.



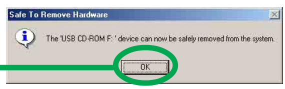
3. Confirm the device to be stopped. Again, select the name of the device you want to unplug.

   Click **OK**.



4. The device can now be safely unplugged from the system.

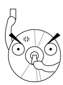
   Click **OK**.



5. The screen display will go back to the **Unplug or Eject Hardware** dialogue box. Click on **Close**.

For Mac users, make sure the drive is idle before disconnecting the device. Close all files and applications using the SCB-2408-D drive.

1. Drag the device icon to the Trash.
2. Unplug the connector from the USB or Firewire port.

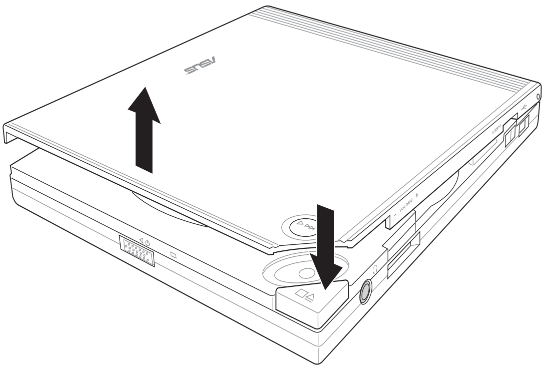


Disconnecting the drive while in use may damage the data files and/or the drive.

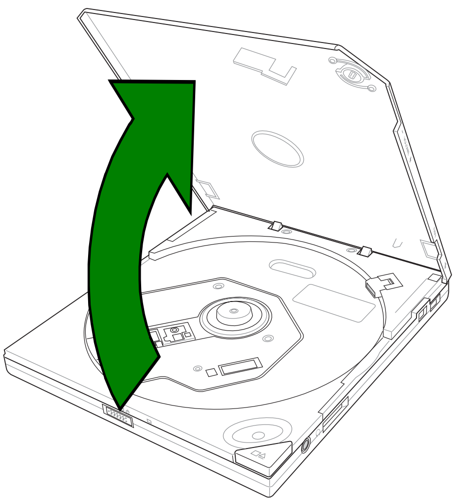
Drive Basics

Placing a Disc into the Drive

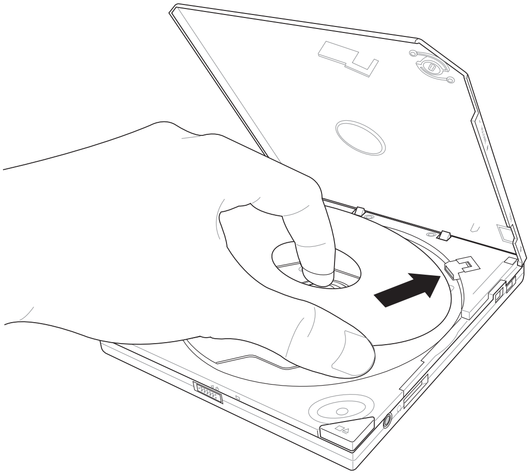
1. Press the stop/open button on the top cover panel of the drive to open the top cover.



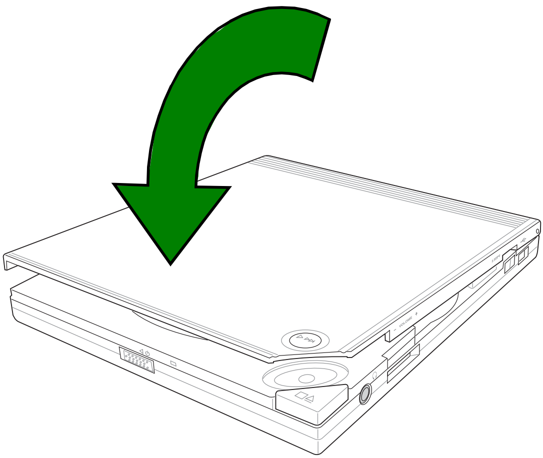
2. When the top cover opens, carefully lift the top cover fully upward.



3. Place the disc into the tray and make sure the disc is securely clipped in place.



4. Close the top cover by gently pressing the cover downwards until the top cover locks in place.



Ejecting a Disc from the Drive

1. Press the open/stop button on the top cover panel of the drive to open the top cover.
2. Carefully remove the disc from the drive.
3. Close the top cover by gently pressing it downwards.

Using the Emergency Manual Eject Bar

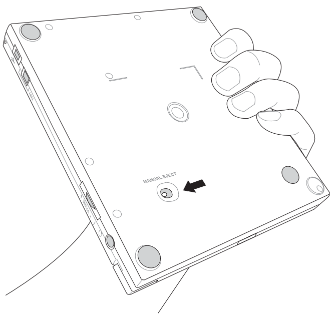
The emergency manual eject bar at the bottom panel of the drive allows you to manually open the top cover and remove a disc from the drive in the following instances:

- supply of power to the computer is cut due to electrical power outage
- the drive malfunctions

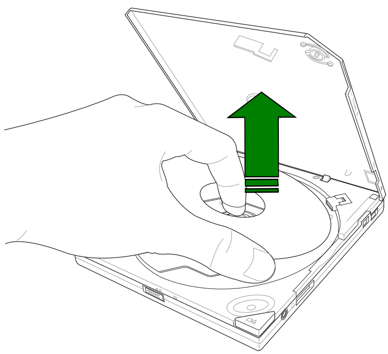
Use the manual method only as a last resort when the open/stop button does not work. Make sure that you have turned off your CD-RW/DVD-ROM drive before manually opening the top cover of the drive.

Follow these steps to manually open the top cover of the drive using the emergency manual eject bar.

1. Lift the slim CD-RW/DVD-ROM drive and place upside down to expose the bottom of the drive. Press the manual eject bar, located as labeled.



2. Open the top cover and carefully remove the disc.

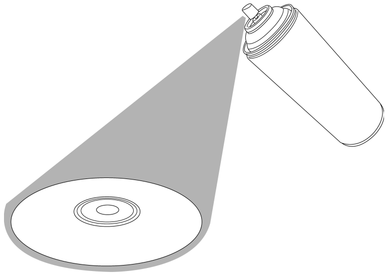


Using Compact Discs

Take note of the instructions in this section when using compact discs. These instructions will help you avoid damaging the discs and your CD-RW/DVD-ROM drive.

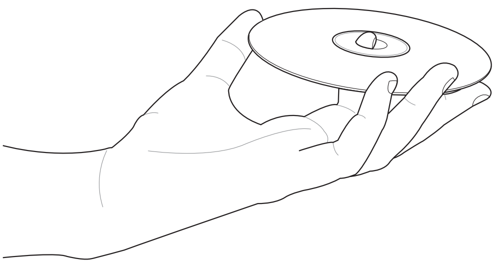
Cleaning a Disc

Spray the disc with compressed air for about five seconds to get rid of the dust on a disc.



Handling a Disc

Hold a disc by the edges. Do not touch the disc surface.



Technical Information

Environmental Specifications

Temperature	Operation: Storage:	5°C < to < 45°C - 20°C to < 60°C
Humidity	Operation: Storage:	8% to 80% non-condensing 5% to 95% non-condensing
Vibration	Operation: Storage:	0.25G peak at 5 ~ 500 Hz 1.5G peak at 10 ~ 500 Hz
Impact	Non-operation: Packaged:	1 oct/min – no damage Less than 50G – (at 11ms/half sine wave, 3 shock/each side) 1 oct/min – no damage 91 cm high – (1 corner, 3 edges, 6 surfaces)
Acoustic	Access mode: Read mode:	41.5 dB TYP 44.5 dB TYP
(Microphone located 50cm in front of the drive, 120 cm above the drive at 30° angle.)		
Reliability	MTBF: ODC (Read): ODC (Write):	60,000 power on hours 20% of power on time 1% of power on time
Mean Time To Repair (MTTR)		30 minutes

Electrical and Audio Specifications

Power Source	Input Linear Voltage Input Linear Frequency Input Linear Current	100/240 V AC 50/60 Hz 1.0 A
I/O Terminal	USB terminal IEEE1394 terminal	USB B type (High Speed) IEEE1394
Audio	No. of channels Sampling frequency Quantization Distortion S/N ratio Output: Headphone	2 (stereo) 44.1 kHz 16 bits 0.2% max. (at 1 kHz) 70 dB 0.7 V rms (typical)

SCB-2408-D

外接超薄複合式光碟燒錄機
24x/12x/24x CD-RW
8x DVD-ROM

使用手冊



給使用者的說明

本產品的所有部分，包括配件與軟體等，其所有權歸華碩電腦公司（以下簡稱華碩）所有，未經華碩公司許可，不得任意地仿製、拷貝、謄抄或轉譯。本使用手冊沒有任何型式的擔保、立場表達或其它暗示。若有任何因本使用手冊或其所提到之產品的所有資訊，所引起直接或間接的資料流失、利益損失或事業終止，華碩及其所屬員工恕不為其擔負任何責任。除此之外，本使用手冊所提到的產品規格及資訊僅供參考，內容亦會隨時更新，恕不另行通知。本使用手冊的所有部分，包括硬體及軟體，若有任何錯誤，華碩沒有義務為其擔負任何責任。

本使用手冊中談論到的產品及公司名稱僅做識別之用，這些名稱可能是屬於其他公司的註冊商標或是版權。

本產品驅動程式改變，使用手冊都會隨之更新。更新的詳細說明請您到華碩的網站瀏覽或是直接與華碩公司聯絡。

產品名稱：華碩 SCB-2408-D 外接超薄複合式光碟燒錄機

手冊版本：2.00 版 T1315

發表日期：2003 年 05 月

華碩的聯絡資訊

華碩電腦公司ASUSTeKCOMPUTERINC.(亞太地區)

市場訊息

地址	：台灣臺北市北投區立德路150號
電話	：886-2-2894-3447
傳真	：886-2-2890-7798
電子郵件	：info@asus.com.tw

技術支援

免費服務電話	：0800-093-456
服務時間	：週一至週五 AM 9:00～PM 9:00 週六、日 AM 9:00～PM 6:00
傳真	：886-2-2890-7698
全球資訊網	：http://taiwan.asus.com.tw/

ASUS COMPUTER INTERNATIONAL (美國)

市場訊息

地址	：44370 Nobel Drive, Fremont, CA 94538, USA
傳真	：+1-510-608-4555
電子郵件	：tmd1@asus.com

技術支援

電話	：+1-502-933-8713
傳真	：+1-502-995-0883
免付費電話	：+1-877-918-ASUS(2787)...筆記型電腦
電子郵件	：tsd@asus.com
全球資訊網	：www.asus.com

ASUS COMPUTER GmbH (歐洲/奧地利)

市場訊息

地址	：Harkortstr. 25, 40880 Ratingen, BRD, Germany
傳真	：49-2102-9599-31
電子郵件 Email	：sales@asuscom.de（僅回答市場相關事務的問題）

技術支援

電話	：49-2102-9599-0 ... 主機板/其它產品 ：49-2102-9599-10 ... 筆記型電腦
傳真	：49-2102-9599-11
線上支援	：www.asuscom.de/kontakt（提供線上支援）
全球資訊網	：www.asuscom.de

歡迎使用華碩產品

感謝您購買華碩 SCB-2408-D ！

為了確保燒錄機正確的安裝與使用方式，請先閱讀本手冊的操作指南以及其他重要資訊。

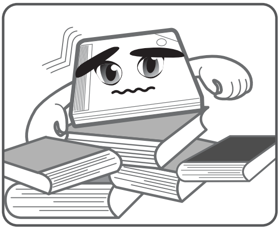
內容

安全資訊

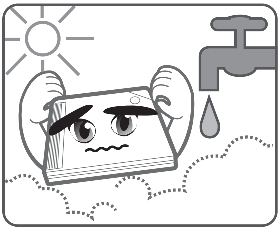
在您安裝和使用華碩 SCB-2408-D 之前，請先瀏覽並且了解下列圖示的預防措施！

燒錄機安裝注意事項

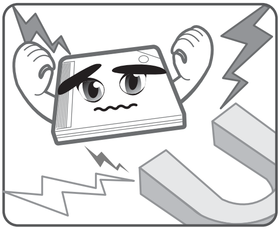
不要將燒錄機置放在任何容易搖晃或容易產生震動的地方。



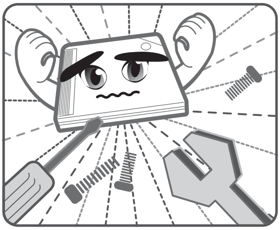
不要將燒錄機置放在陽光直接照射到的地方、溼度高的地方或者任何潮溼的地方。



不要將燒錄機置放在磁性物品附近，像電視、收音機等會散發電波干擾的電子產品皆會影響燒錄機的運作效能。



不要擅自拆解或者企圖自行維修燒錄機。打開機殼有可能導致幅射外洩而發生危險。



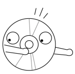
使用燒錄機

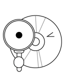
- 請勿將燒錄機從寒冷的環境搬移到溫暖或燥熱的環境。劇烈的溫度改變會損及燒錄機的精密零件。
- 若要搬移燒錄機或者從電腦主機中移出燒錄機，請先確認燒錄機內的光碟片已經先行取出。
- 請避免讓任何液體浸沾到燒錄機或者讓小型金屬物品掉落到燒錄機中。如果有這種情況發生，請聯絡您的經銷商尋求解決之道。
- 不要使用任何易揮發性的溶劑來清潔燒錄機。如果在使用溶劑時不小心噴灑到燒錄機，請使用乾淨的布將燒錄機擦拭乾淨。此外，您也可以在擦拭沾到溶劑的燒錄機時加一點中性清潔劑，藉此來稀釋溶劑的濃度以便能夠更容易地得到清除效果。
- 請勿在燒錄機進行讀取或寫入動作的時候中斷電源。
- 請勿將已損毀或有裂痕的光碟片放入燒錄機內讀寫，劣質的碟片不但會損傷燒錄機，也可能造成您身體的傷害。
- 由於燒錄機讀取光碟片時有一定的工作溫度範圍，因此不要馬上將從寒冷環境中取得的光碟片放入燒錄機中，特別是在冬天。此時請先等待光碟片溫度回復到室溫時再使用。

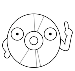
ICON 說明

以下為本手冊所使用到的各式符號說明：


警告／危險：因不當的動作可能會對人體產生傷害或危險。


小心：因不當的動作可能會對產品及零件造成損害。


注意：重點提示，重要的注意事項。


說明：小祕訣，名詞解釋，或是進一步的資訊說明。

產品包裝盒

在打開您的華碩 SCB-2408-D 包裝盒之後，請即刻檢查您的包裝盒中的各項物品是否與下表的清單符合，並且檢查物品外觀上是否有損壞。若有物品遺漏或損壞的情形，請馬上聯絡您的經銷商。（以下為零售禮盒包裝）

- 華碩外接式 SCB-2408-D 超薄複合式光碟燒錄機
- 排線組（USB 2.0 排線，IEEE1394 排線）
- 電源變壓器及轉接插座
- 華碩高速 CD-R 空白光碟片
- 華碩高速 CD-RW 空白光碟片
- 本使用手冊
- 多國語言快速安裝指南
- 附贈軟體光碟

  -燒錄軟體

  -DVD Playback 軟體

  -Win98SE 及 MacOS USB2.0 驅動程式
- 高級燒錄機皮套

歡迎使用華碩產品

感謝您購買華碩 SCB-2408-D 複合式光碟燒錄機！

為了確保燒錄機正確的安裝與使用方式，請先閱讀本手冊的操作指南以及其他重要資訊。

產品資訊

燒錄機規格

華碩 SCB-2408-D 的規格列舉如下：

· **讀/ 寫/ 覆寫速度**	
- CD-R 寫入速度	24x, 20x, 16x (P-CAV), 10x, 8x, 4x (CLV)
- CD-RW 寫入速度	12x (P-CAV), 10x, 8x, 4x, (CLV)
- CD 讀取速度	24x max (CAV)~3600 KB/Sec
- DVD 讀取速度	8x max (CAV)~10820 KB/Sec
- DAE 速度	24x max (CAV)~3600 KB/Sec
- 平均資料存取時間	DVD: 120 ms / CD: 100 ms
· **使用介面**	USB 2.0 及 IEEE1394
· **支援技術**	*FlextraSpeed*™ 智慧型燒錄速度調整技術 *FlextraLink*™ 廢片終結燒錄技術 P-CAV 部分等角速寫入技術
· **緩衝記憶體大小**	2MB
· **適用的光碟片型式**	12 cm 或 8 cm 直徑、1.2 mm 厚度的光碟片 DVD: DVD-ROM, DVD-R, DVD-RW, DVD-Video, DVD+RW CD: CD-Audio, CD-ROM, CD-ROM/XA, CD-I, Mixed Mode CD-ROM, Photo CD, CD-Extra, Video CD, CD-Text, DVCD, CD-G, Karaoke CD, I-trax, Bootable CD
· **寫入模式**	Track-at-Once, Disc-at-Once, Session-at-Once,Multi-Session, Packet Write, DAO-RAW Mode
· **外觀尺寸**	129.0 (寬) x 142.0 (長) x 16.0 (高) mm
· **重量**	250 g

您可以在第 28 頁「技術資訊」中得到更詳盡的規格說明。

特殊功能

華碩 SCB-2408-D 複合式光碟燒錄機是一款擁有 24 倍速寫入、12 倍速覆寫以及 24 倍速讀取的外接式燒錄機，並具有 8 倍速 DVD-ROM 讀取速度。此款複合式光碟燒錄機同時支援 USB 2.0 以及 IEEE1394 規格，並且在 CD 燒錄的方式上引進了許多革新性的技術。包括 *FlextraSpeed™* 智慧型燒錄速度調整技術，*FlextraLink™* 廢片終結燒錄技術以及 P-CAV 部等角速寫入技術，分別說明如後：

FlextraSpeed™ 智慧型燒錄速度調整技術

華碩研發團隊網羅近50家碟片廠商出廠的可單/多次寫入光碟片，並根據其特質與測試結果為分析參數，評估各種碟片能夠達到最佳燒錄品質的最適燒錄速度。搭載此項技術的燒錄機在實際進行光碟燒錄前，可根據此資料庫的訊息，預先將讀寫頭設置在最適當的雷射功率 (OPC)。

然而在實際燒錄過程中，除了衆多品質參差不齊的光碟片品牌影響燒錄品質之外，縱使光碟片製造廠的品質佳，難保每一個碟片的品質完全相同，溫度、染料、溼度、灰塵、指紋等等的環境因素皆會影響碟片的讀寫特性。內建 *FlextraSpeed™* (Flexible and Strategic Writing Speed Technology)的燒錄機在燒錄過程中，持續地觀察碟片的寫入狀態，當寫入的碟片因為不能承受高功率雷射與高速燒錄時，即可適時地調整燒錄速度；或是因為碟片上的軌道彎彎曲曲或偏心，使得燒錄器難以追蹤軌跡時，燒錄機會依據碟片的品質自行調整適合該碟片的燒錄速度並繼續燒錄工作。

*FlextraSpeed™*智慧型燒錄速度調整技術可以：

・使燒錄機效能最大化

・自動調整至最省時、省事的燒錄

・佔用最小的系統資源

・降低使用時噪音

・延長馬達壽命

FlextraLink™ 廢片終結燒錄技術

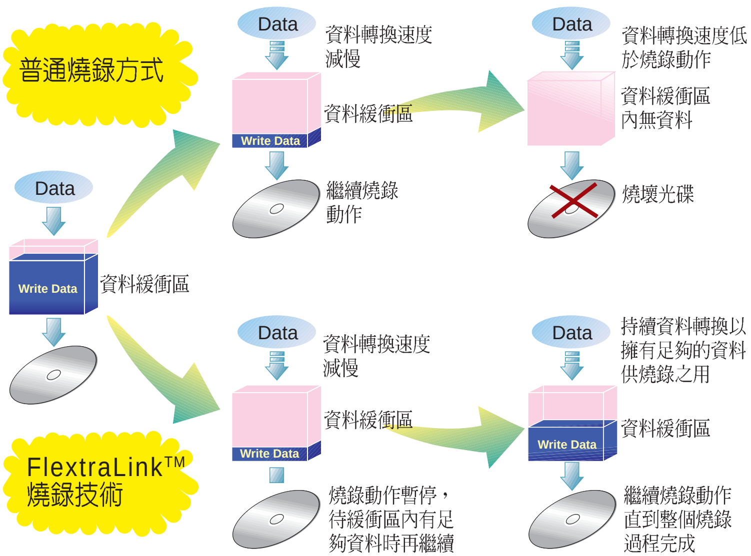
FlextraLink™ 廢片終結燒錄技術的名稱乃取自 Flexible and Strategic Writing Technology，用來預防在進行燒錄資料時因資料緩衝區內沒有足夠的資料可供燒錄使用而導致嚴重的 Buffer Underrun 錯誤的產生。此外，它也會在整個燒錄動作中持續地監視資料緩衝區內的狀況。

倘若在燒錄時存放在緩衝區內的資料量已低於整個緩衝區容量的 1% 時，*FlextraLink™* 廢片終結燒錄技術會中斷目前的燒錄動作，並且會在中斷的地方設下一個記號。此時新的資料會開始填入緩衝區中，而雷射讀寫頭也將會被重新定位。當緩衝區裡的新資料已儲存到可再供燒錄所需的量時，雷射讀寫頭會移動到被 *FlextraLink™* 廢片終結燒錄技術所中斷的資料節區後面，再接續燒錄動作。

這個技術也能夠確保您的電腦能夠在燒錄機燒錄的同時，可以再執行其他的應用程式。

以下的圖示將可說明採用 *FlextraLink™* 廢片終結燒錄技術的優點。

FlextraLink™ 廢片終結燒錄技術示意圖



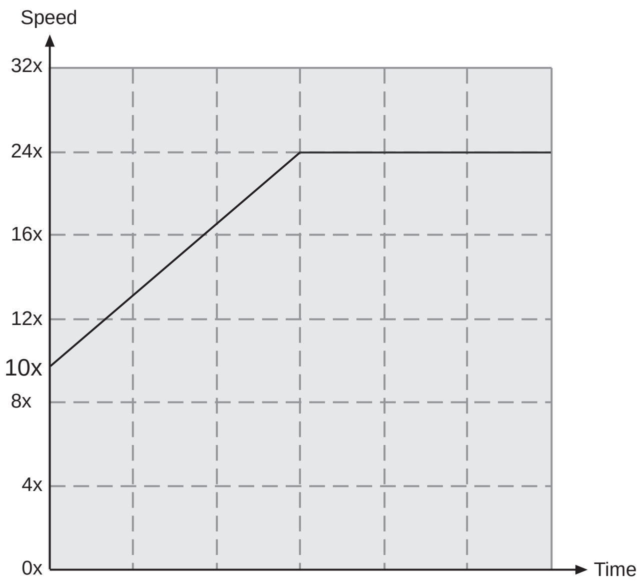
P-CAV 部分等角速寫入技術

P-CAV（Partial Constant Angular Velocity）部分等角速寫入技術是一種結合 CAV 等角速寫入技術與 CLV（Constant Linear Velocity）等線速度寫入技術的一種光碟燒錄技術。CAV 是指光碟燒錄機的馬達轉速相同，但因光碟片內圈與外圈的資料量不同（內圈的資料量較少，外圈資料量較大），因此，當燒錄工作由內圈進行至外圈時，燒錄的速度將會愈來愈快，如此將可為使用者減少許多燒錄的時間。CLV 則是視馬達轉速的變化來調整，並使其維持一定的寫入速度。

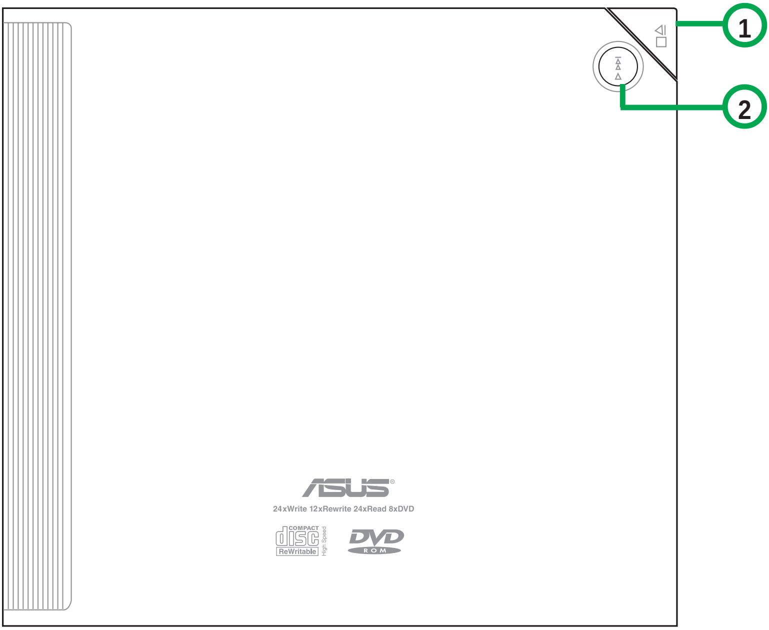
P-CAV 部分等角速寫入技術會隨時切換使用 CAV 或 CLV 寫入技術，務使達到最大的寫入速度。但不同於 Zone CLV 區域等線速度燒錄技術，在 P-CAV 的燒錄過程中並不會產生任何的連結，以達到最大的平均寫入速度。

右圖圖解範例說明了 P-CAV 的運作方式：

P-CAV燒錄技術



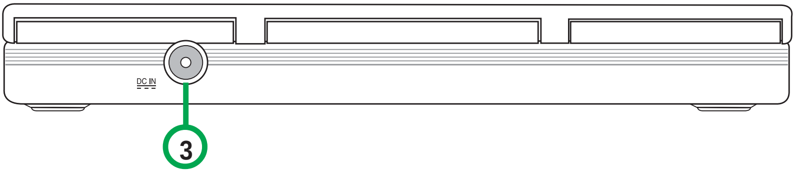
上蓋面板



1. 停止/開啓 按鍵
此一按鍵有兩種功能，當燒錄機閒置時，按下此一按鍵即可開啓上蓋，以置入或取出光碟；當燒錄機正在執行時，按下此一按鍵即停止工作。

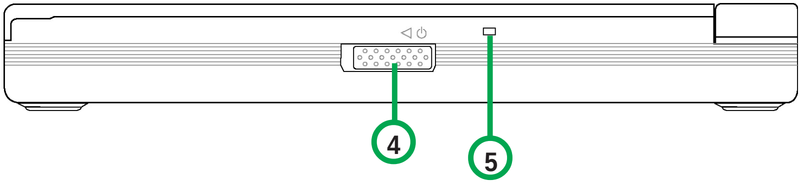
2. 播放/快轉 按鍵
此一按鍵有兩種功能，當燒錄機閒置時，按下此一按鍵即可開始播放；當燒錄機正在播放時，按下此一按鍵即跳到下一軌播放。

左側面板



3． 5V **電源接頭**
請將電源變壓器插頭插入此一接頭。

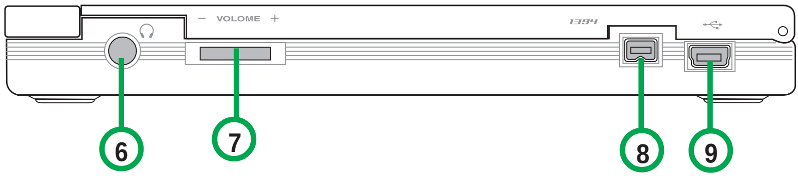
右側面板



4. **電源開關**
此開關用來打開或關閉光碟機電源。將此開關往右推即關閉電源，往左推即可打開電源。

5. **電源／讀／寫指示燈**
當您打開電源時，或當您連接好 USB 或 IEEE1394 排線，或燒錄機正在讀取光碟内的資料時，此燈號會閃綠燈；而當燒錄機正在寫入資料至光碟片時，此燈號即會閃紅燈；當電源關閉則此燈號熄滅。

後側面板



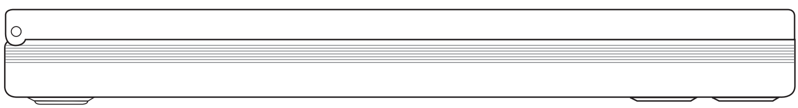
6. 耳機插座
用來連接耳機，以提供您聆聽音樂光碟片時之用。

7. 耳機音量控制旋鈕
向右轉動增加耳機音量；向左轉動減小耳機音量。

8. IEEE 1394 **接頭**
連接標準的 1394 排線至您的電腦。

9. USB **接頭**
連接標準的 USB2.0 排線至您的電腦。

前側面板



安裝

系統要求

在您安裝及使用燒錄機之前，請確認您的電腦系統符合下列需求：

筆記型電腦或個人電腦

- 使用相容於 IBM 個人電腦規格的 Pentium II 333MHz 或更高處理器時脈的個人電腦
- 使用 Windows 98SE/ME/XP/2000 作業系統
- 最少需要 64MB 系統記憶體，我們建議您擴充至 128MB

麥金塔電腦

- PowerPC® 處理器（G3、G4 或 G4 Dual）
- Mac OS 9.1、9.2 或 Mac OS X 10.1
- 最少需要 128MB 系統記憶體

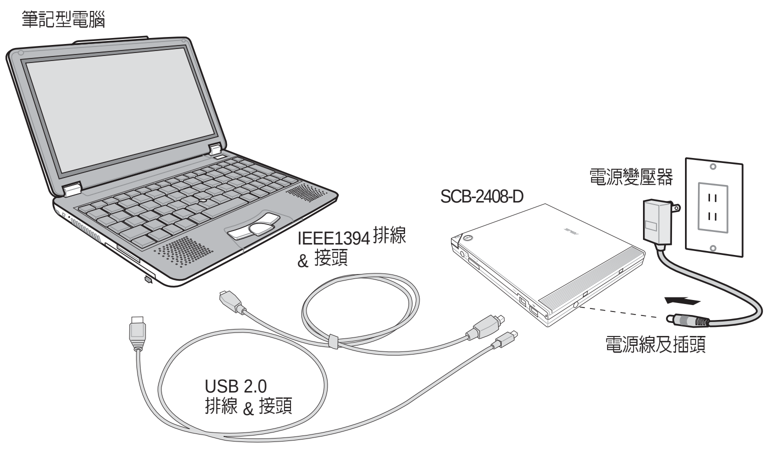


請勿將已損毀或有裂痕的光碟片放入燒錄機內讀寫，劣質的碟片不但會損傷燒錄機，也可能造成您身體的傷害。

連接裝置排線

1. 將 USB 排線的 B型 USB 接頭連接到燒錄機的 USB 埠，或將 1394 排線連接至燒錄機的 1394 連接埠。
2. 將 USB 排線的 A型 USB 接頭連接到個人電腦的 USB 埠，或將 1394 排線連接至人電腦的 1394 連接埠。。
3. 將變壓器的電源線接頭連接到燒錄機的電源插孔。
4. 將電源線的插頭連接到電源插座上。

當您連接排線時，請注意所有的排線接頭是否與裝置上相對應的接頭相符，當您發現插頭規格不符而無法插入時，請勿強行插入，以免發生損壞。此時請速洽詢您購買產品時的經銷商。



電源插頭會因各國使用標準不同而有所不同。

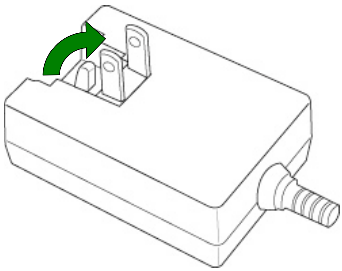
如何使用電源變壓器與轉接插座

本產品所附帶的電源變壓器與轉接插座可讓使用者在不同國家、地區以及不同電壓運作頻率下，仍可連接各地的電源供應插座來使用本產品。

以下步驟為指導您如何一步步完成電源變壓器與轉接插座的連接。

安裝說明

本電源供應器設計了一組可收藏式的雙針扁平式針腳供連接電源供應插座使用。若此規格符合您所在區域的電源供應插座規格，請將針腳上移 90 度，再將針腳插入電源插座。



使用電源轉接頭

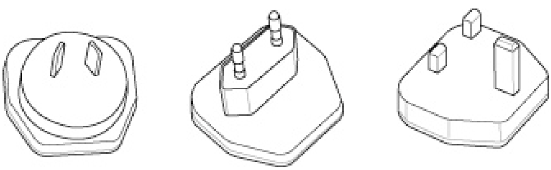
1. 因世界各個地區制定的電源接頭規格與電壓頻率有所不同，所以我們提供了三組常見之電源轉接頭供您在其它地區使用。

請確認在您的包裝有以下項目：

(A) 呈倒 V 形狀，附有雙針扁平式針腳的電源轉接插座。

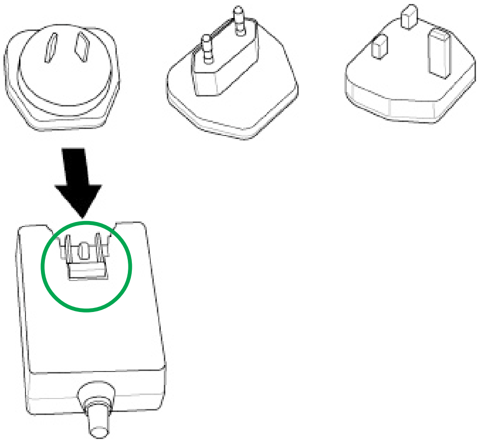
(B) 附有雙針圓柱式針腳的電源轉接插座。

(C) 附有三針式（二枝針腳為扁平式，一支為長條式）針腳的電源轉接插座。

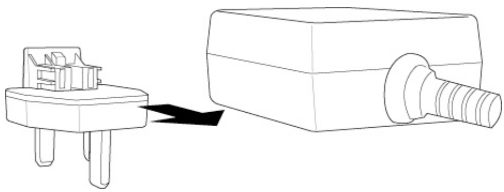


(A) **(B)** **(C)**

2. 每一組電源轉接插座皆可與電源供應器組合使用，在您安裝轉接插座之前，請參考下圖所示，將電源供應器的針腳收起平放於缺口中。

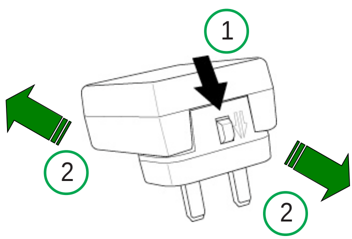


3. 請參照下圖，對準電源插座的連接缺口，再將轉接插座置入。



移除電源轉接頭

1. 當您想移除電源轉接頭時，請先按下圖中標示 1 的扣環，再分別握住電源插頭與電源轉接頭的二端，並如圖中標示 2 的方向輕輕施力，即可將轉接頭與電源供應器分開。



安裝燒錄機驅動程式

Windows 98SE

若您使用 Windows 98SE 作業系統，在您使用華碩 SCB-2408-D 複合式光碟燒錄機之前，您必須安裝燒錄機的驅動程式。

請依照下面步驟安裝光碟機驅動程式：

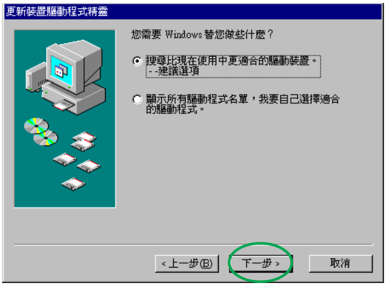
1. 請確定您的燒錄機已安裝妥當，並連接好電源線及排線。
2. 打開電腦電源。
3. 將附贈軟體光碟置入電腦上已內建的光碟機 / 燒錄機中。
4. 打開燒錄機電源。
5. 當您重新啓動電腦之後，系統會偵測到有新的硬體加入，請依照安裝精靈的指示操作以安裝驅動程式。

   點選 **下一步**。



6. Windows98SE™會自動搜尋最適合的驅動程式，請選擇「搜尋比現在使用中更適合的驅動裝置。- - 建議選項」。

   點選 **下一步**。



7. 選擇驅動程式 INF 檔所在的位置。

   點選 **瀏覽**。



8. 選擇驅動程式所在光碟的檔案夾 ASUS_RW_USB。

點選 **確定**。



9. 此時，在「指定的位置」下即會出現驅動程式所在目錄的名稱。

點選 下一步。



10. 接下來系統會自動搜尋資料夾中的檔案，並找到一個 INF 驅動程式檔案。

點選 下一步。



11. 接下來系統會開始安裝，待安裝完成時即會出現這個畫面。

點選 完成 即可。

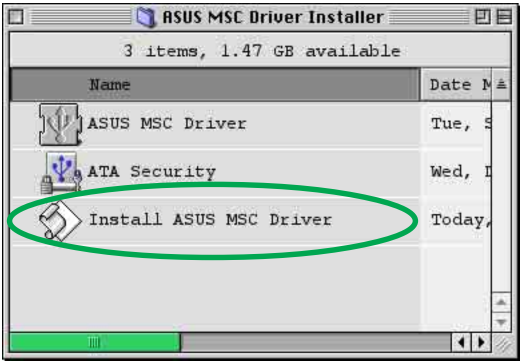


Mac OS 9.X

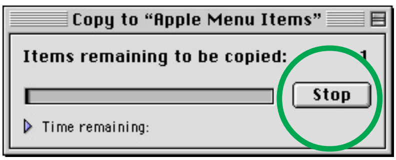
若您使用 Mac OS 9.x 作業系統，在您使用華碩 SCB-2408-D 複合式光碟燒錄機之前，您必須安裝燒錄機的驅動程式。

請依照下面步驟安裝 SCB-2408-D 驅動程式：

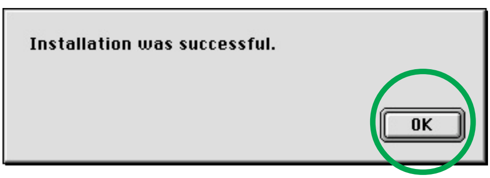
1. 打開電腦電源。
2. 將附贈軟體光碟置入電腦上已內建的光碟機 / 燒錄機中。
3. 打開 **ASUS MSC Driver Installer** 資料夾。
4. 用滑鼠雙擊 **Install ASUS MSC Driver** 。



5. 安裝程式將會開始複製所需的程式至您的系統中，此時若您想中斷此安裝程式，按一下 **Stop** 按鈕即可。



6. 當所需的程式或項目都已安裝完成之後，會出現以下的視窗，請在這裡按一下 **OK** 即可，此時您就可以開始使用您 SCB-2408-D 複合式光碟燒錄機了。



檢查裝置是否出現在裝置管理員中

要確認您是否已正確安裝華碩 SCB-2408-D，請依照下面的步驟來檢查：

Windows系統

1. 在桌面上的 **我的電腦** 圖示上按一下滑鼠右鍵。
2. 在繼而出現的選單中選擇 **內容**。
3. 選擇 **裝置管理員** 標籤頁。
4. 在裝置的清單中選擇CD-ROM，看到ASUS SCB-2408-D的裝置名稱，且無任何錯誤訊息，即表示您已正確安裝此一裝置。



說明：顯示畫面會因作業系統不同而有所不同。

麥金塔系統

當您將 SCB-2408-D 連接至 Mac 系統時，請將光碟片置入燒錄機中。

1. 打開燒錄機電源。
2. 將光碟片置入燒錄機中。
3. 點選蘋果控制選單，並選擇 **蘋果系統設置**。
4. 選擇 **設備與卷宗** 標籤頁，在這裡可以看到所有與 Mac 系統連接的各式裝置。
5. 你可以看到一個帶有 USB 裝置符號的光碟圖示 ，它通常會出現在這個清單的最後。



移除 SCB-2408-D 複合式光碟燒錄機

當您要將華碩 SCB-2408-D 複合式光碟燒錄機移除或暫不連接時，請依照下面的步驟來移除，以避免系統資料發生毀損或遺失。

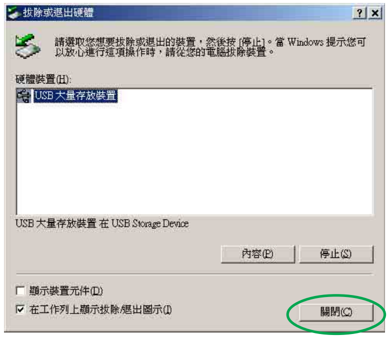
Windows 系統

1. 請在工作列上的「取出或抽出硬體」圖示上雙擊滑鼠左鍵。



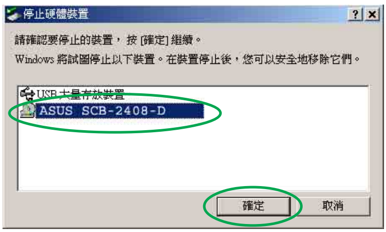
2. 在繼而出現的「拔除或退出硬體」視窗中選擇「USB 大量存放裝置」。

   點選 **停止**。



3. 選擇 ASUS SCB-2408-D。

   點選 **確定**。



4. 最後即會出現〝可以放心移除硬體〞的對話框。

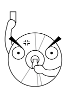
   點選 **確定** 即可將裝置拔除。



麥金塔電腦

請務必確認燒錄機處於閒置的狀態，才可以將燒錄機移除，並關閉所有燒錄機正在執行的程式，否則可能會造成資料毀損，甚至有可能損壞燒錄機本身。

1. 將桌面上的裝置圖示直接拖拉至垃圾筒。
2. 拔除 USB 或 Firewire 連接排線。

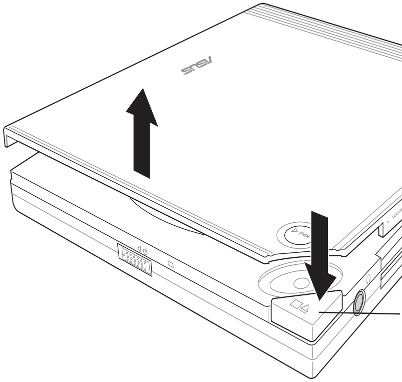


請勿在燒錄機仍於運作中就直接將裝置移除，將可能導致檔案 / 裝置損毀。

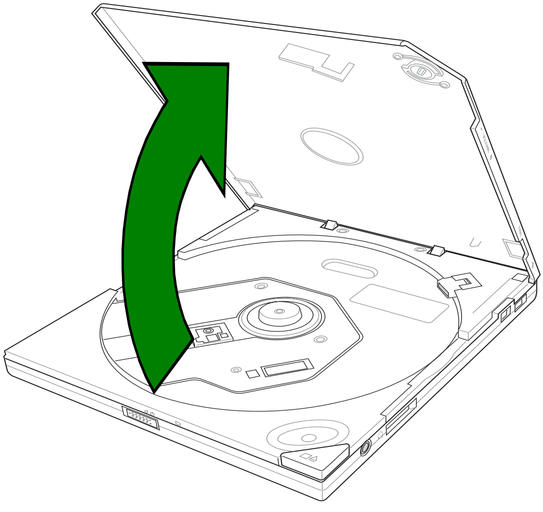
超薄複合式光碟燒錄機的使用

放入光碟片

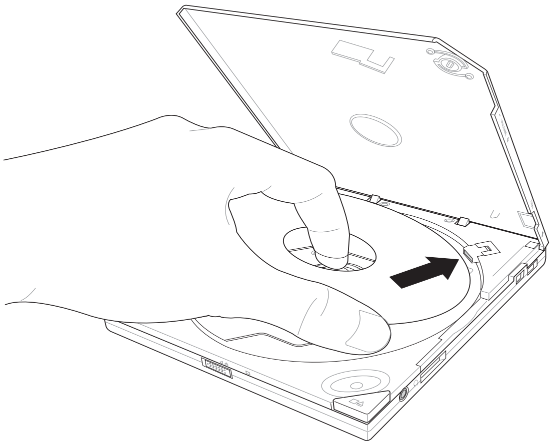
1. 按下燒錄機面板上的「停止／開啓」按鍵以開啓燒錄機上蓋。



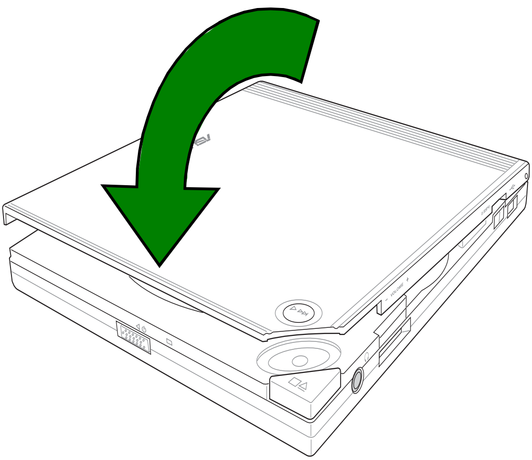
2. 當燒錄機上蓋彈開後，請用手慢慢地將上蓋整個打開，如下圖所示。



3. 將光碟片印有標籤識別的那一面朝上小心地放入燒錄機的托盤中，注意光碟片是否卡入正確的位置，以免發生光碟片鬆脫的情形。



4. 將燒錄機上蓋小心地往下闔上，當聽到一聲清脆的響聲即表示燒錄機已蓋好。



退出光碟片

1. 按下燒錄機面板上的「停止／開啓」按鍵將托盤推出。
2. 從托盤取出光碟片。
3. 將燒錄機上蓋小心地往下闔上，當聽到一聲清脆的響聲即表示燒錄機已蓋好。

緊急退片開關

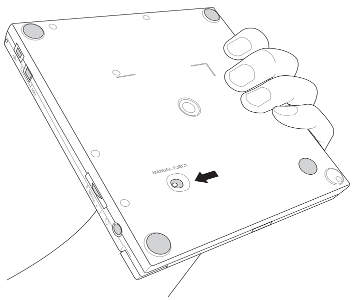
位在燒錄機背面的緊急退片開關可以讓您在遇到下面幾種情況時，以手動的方式將光碟片取出：

- 電腦電源遭到不明原因中斷
- 燒錄機發生故障

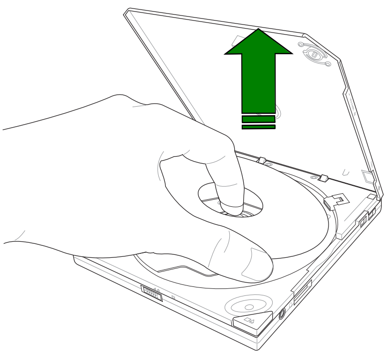
請確認您無法利用面板上的開啓鈕退出光碟時，才使用緊急退片開關將光碟片由托盤中取出。且在使用緊急退片開關之前請確認是否已關閉電源。

請依照下面步驟利用緊急退片開關將光碟片由托盤中取出：

1. 請將燒錄機反轉至背面，接著請將緊急退片開關切向左邊，即可鬆開燒錄機上蓋。



2. 接著請小心地將燒錄機上蓋完全打開，然後慢慢地取出光碟片。

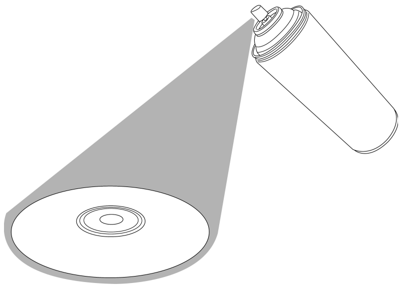


光碟片使用

以下為使用燒錄機時須注意的幾個事項，它將幫助您避免損壞光碟片及燒錄機。

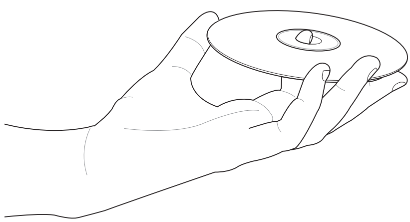
清潔光碟片

您可以使用壓縮空氣罐朝著光碟片表面噴灑約五秒鐘的時間即可除去表面灰塵。



拿取光碟片

拿取光碟片時僅需輕握住光碟片外緣，不要直接觸摸光碟片表面。



技術資訊

使用環境規格

溫度	工作溫度： 5˚C < to < 45˚C 儲存溫度：-20˚C < to < 60˚C
濕度	工作濕度：8% to 80%（非壓縮) 儲存濕度：5% to 95%（非壓縮)
震動容許值	操作時：最高 0.25G（at 5 ~ 500 Hz) 未操作：最高 1.5G（at 10 ~ 500 Hz)
碰撞容許值	未操作：低於 50G（at 11ms/half sine wave,3 shock/each side） 掉落碰擊：91公分高（1 角 3 菱 6 面)
音效規格	存取模式：41.5 dB TYP 讀取模式：44.5 dB TYP
(麥克風應置於燒錄機前上方，距前面板50公分，距頂部120公分的30度位置。）	
平均故障間隔時間（MTBF，Mean Time Between Failure)	60,000 Power On Hours ODC 20% of Power On Time（讀取動作） ODC 1% of Power On Time（寫入動作）
平均修復時間（MTTR，Mean Time To Repair)	30 分鐘

***ODC - Operating Duty Cycle**

電氣及音效規格

使用電源	輸入線性電壓 輸入線性頻率 輸入線性電流	100/240 V AC 50/60 Hz 1.0A
I/O 接頭	USB IEEE1394	USB B 型接頭（高速） IEEE1394
音效	聲道 取樣 數位音效 失真率 訊噪比（S/N ratio） 輸出	2（立體聲） 44.1 kHz 16 bits 最大 0.2%（at 1kHz） 70 db 麥克風：0.7V rms (typical)